



Gold Rush Antiques Database

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Intro

After the rapid growth of Gold Rush Antiques, a new system is needed to be able to manage multiple shop locations all while trying to increase their sales. Gold Rush Antiques is in need of a sales management system to manage:

- Sales Transactions
- Booths
- Booth Locations
- Product Inventory

The Gold Rush Antiques owner knows the efficiency a database system could give the company. The owner is aware that a centralized system that stretches across all locations will massively increase the company's effectiveness. With this in mind, the owner of Gold Rush Antiques wants to implement a database to provide support for:

- Employees
- Customers
- Dealers

Our Database will be the answer to their problem with our Forms, queries, and entity relationship diagram.



Problem

The problem is that management currently is not able to track all these variables and items in the stores that they currently have. They need a Database to be able to track all of these items.

Gold Rush Antiques have experienced heavy growth since their opening of three new locations in the past few years. The opening of these new stores created a need to fix pre-existing problems that include:

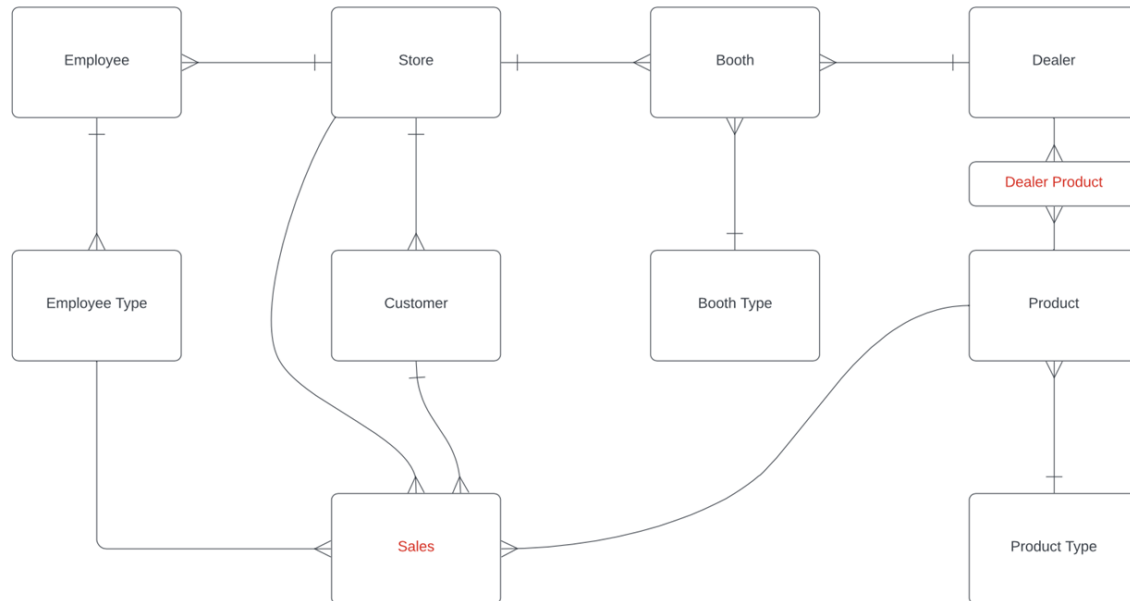
- Employee Hours Logging
- Label Creation for Sales
- Hand-Written Price Tags
- Simple Cash Register Transactions
- Outdated Spreadsheet Practices



Not only does management need this Database for the current stores, but they also could use our Database solution for any other expansions beyond these three locations.

Entity Relationship diagram

Gold Rush Antiques: Final ERD



Employee Input Form

The Employee Input form helps management keep track of their employees at each location. On the Employee Input Form, dealers are able to edit employee information in the database through the Employee Information Form. The form also creates the ability to save the employees data, add a new employee, or delete an existing employee.

Employee Information

Gold Rush Antiques
Employee Information Form

EmployeeID: EMP001 First Name: Jared

Last Name: Williams Street Address: 1245 Kentucky Avenue

City: Birmingham State: Alabama

Zip Code: 35242 Phone Number: (205) 333-1212

Email Address: jwilliams@email.com Employee Type ID: Loader

Store ID: LOC001

Save Employee Add A New Employee Delete Employee

Sample Data From Select Employee Statement:

EmployeeID	EFirstName	ELastName	EStreetAddress	ECity	EState	EZipCode	EPhoneNumber	EEmailAddress	EmployeeTypeID	StoreID
EMP001	Jared	Williams	1245 Kentucky Avenue	Birmingham	AL	35242-	(205) 333-1212	jwilliams@email.com	Loader	LOC001
EMP002	Austin	Green	4574 Indiana Avenue	Birmingham	AL	35242-	(205) 333-5684	agreen@email.com	Cashier	LOC001
EMP003	John	Brown	6085 Illinois Avenue	Birmingham	AL	35242-	(205) 333-6812	johnbrown@email.com	Greeter	LOC001
EMP004	Sara Beth	Grissom	7010 Arkansas Road	Birmingham	AL	35242-	(205) 222-3655	sbgrisson@email.com	SalesAssoc	LOC001
EMP005	Jessica	Brass	6945 Hampshire Lane	Montgomery	AL	36106-	(334) 777-5652	jbrass@email.com	Cashier	LOC002
EMP006	Amanda	Keller	3522 Missouri Way	Montgomery	AL	36106-	(334) 777-8447	akeller@email.com	SalesAssoc	LOC002
EMP007	Jason	Taylor	4885 Nevada Trail	Montgomery	AL	36106-	(334) 777-2289	jasontaylor@email.com	Loader	LOC002
EMP008	Claude	Boyd	7225 Wisconsin Lane	Montgomery	AL	36106-	(334) 777-6674	cboyd@email.com	Greeter	LOC002
EMP009	Mary Ann	Bennett	1145 Carolina Avenue	Columbus	GA	31909-	(706) 444-2548	mabennett@email.com	Cashier	LOC003
EMP010	Tamika	Simms	4995 Pennsylvania Lane	Columbus	GA	31909-	(706) 444-3228	tsimms@email.com	SalesAssoc	LOC003
EMP011	Sean	Sharpe	3553 Baltic Avenue	Columbus	GA	31909-	(706) 444-9945	ssharpie@email.com	Loader	LOC003
EMP012	Suzanne	McKinzie	8225 Vermont Trail	Columbus	GA	31909-	(706) 444-1875	smckinzie	Greeter	LOC003

Products Input Form

A dealer can fill their booth with any product they desire, but 60% of the booths products must be considered antique or vintage, and the other 40% of the booths products can be a mix of different product types.

The Products input form helps a dealer determine what products they currently have in their inventory, and helps them maintain their 60/40 ratio of products on hand.



The screenshot shows a web application window titled "Products Input". Inside, the header reads "Gold Rush Antiques" in yellow and "Products Form" in a smaller yellow font. The form contains several input fields: "Product ID:" with the value "P00001", "Product Name:" with "Vintage Rolling Desk", "Price:" with "\$250.00", "Cost:" with "\$150.00", "Color:" with "Cherry", "Material:" with "Oak", and "Product Type ID:" with "PT004". At the bottom, there are three buttons: "Save Product", "Add A New Product", and "Delete Product".

Sample Data From Select Product Statement:

ProductID	ProductName	Price	Cost	Color	Material	ProductTypeID
P00001	Vintage Rolling Desk	\$250.00	\$150.00	Cherry	Oak	PT004
P00002	Jets Helmet Signed	\$125.00	\$ 50.00			PT001
P00003	Ceramic Devil Face Jug	\$ 25.00	\$ 10.00	Gray	Ceramic Glass	PT008
P00004	Santa Ornament	\$ 15.00	\$ 5.00	Red		PT009
P00005	John Deere Tractor set	\$ 10.00	\$ 2.00			PT007
P00006	Elvira Doll unopened	\$ 40.00	\$ 10.00			PT007
P00007	Whodini Vinyl Album	\$ 5.00	\$ 2.00			PT002
P00008	Gloria Estafan Let it loose album	\$ 5.00	\$ 2.00			PT002
P00009	Ships in storm 10 x 12 Painting	\$ 75.00	\$ 25.00			PT006
P00010	Nutcracker	\$ 12.00	\$ 5.00			PT009



Stores of the Best Sales Query

Here we can run a query to see what stores are generating the highest sales. If management wanted to they could do some analysis or research to see what is going on in the stores and could figure out what products are selling

This could be really helpful if management to see what their locations are doing right and what others are doing wrong, whether that be vendors, products, locations, marketing or any mix.

```
SELECT SaleRep.StoreID, SaleRep.SaleID, Store.SCity, SaleRep.Amount  
FROM SaleRep, Store  
ORDER BY Amount DESC;
```

	StoreID	SaleID	SCity	Amount
1	LOC001	Sale0005	Birmingham	250
2	LOC002	Sale0005	Montgomery	250
3	LOC003	Sale0005	Columbus	250
4	LOC003	Sale0006	Columbus	125
5	LOC002	Sale0006	Montgomery	125
6	LOC001	Sale0006	Birmingham	125
7	LOC001	Sale0008	Birmingham	100
8	LOC002	Sale0008	Montgomery	100
9	LOC003	Sale0008	Columbus	100
10	LOC003	Sale0007	Columbus	90
11	LOC002	Sale0007	Montgomery	90
12	LOC001	Sale0007	Birmingham	90
13	LOC001	Sale0002	Birmingham	80
14	LOC002	Sale0002	Montgomery	80
15	LOC003	Sale0002	Columbus	80
16	LOC003	Sale0003	Columbus	60
17	LOC002	Sale0003	Montgomery	60
18	LOC001	Sale0003	Birmingham	60
19	LOC001	Sale00010	Birmingham	50

Products listed Query

Here we can see what products are associated with what Product ID. Here we could see what products are being sold in what orders, how much they cost, and how many are on hand for each antique store.

Management could do more with this query like figuring what products are selling more than others and how many to forecast and have on hand at each Antique store

```
select Product.ProductID, Product.ProductName, Product.Price, Sale.Quantity  
from Product, Sale  
order by Quantity, ProductName;
```

	ProductID	ProductName	Price	Quantity
1	P00003	Ceramic Devil Face Jug	25.00	1
2	P00003	Ceramic Devil Face Jug	25.00	1
3	P00006	Elvira Doll Unopened	40.00	1
4	P00006	Elvira Doll Unopened	40.00	1
5	P00008	Gloria Estafan Let It Loose Album	5.00	1
6	P00008	Gloria Estafan Let It Loose Album	5.00	1
7	P00002	Jets Helmet Signed	125.00	1
8	P00002	Jets Helmet Signed	125.00	1
9	P00005	John Deere Tractor Set	10.00	1
10	P00005	John Deere Tractor Set	10.00	1
11	P00010	NutCracker	12.00	1
12	P00010	NutCracker	12.00	1
13	P00004	Santa Ornament	15.00	1
14	P00004	Santa Ornament	15.00	1
15	P00009	Ships in storm 10 x 12 Painting	75.00	1
16	P00009	Ships in storm 10 x 12 Painting	75.00	1
17	P00001	Vintage Rolling Desk	250.00	1
18	P00001	Vintage Rolling Desk	250.00	1
19	P00007	Whodini Vinyl Album	5.00	1
20	P00007	Whodini Vinyl Album	5.00	1





Stores and Margin Query

From the following Query we are able to see stores are selling products for and exactly how margin they are making on each product as well as their cost. Management could then track down what products they could want to keep.

Depending on what location sells more of low margin or higher margin depending on the income of the margin.

```
SELECT Store.StoreID, SaleRep.Price, ProductRep.Cost, ProductRep.Margin  
FROM Store, SaleRep, ProductRep;
```

	StoreID	Price	Cost	Margin
1	LOC001	10	5.00	3.0
2	LOC001	5	5.00	3.0
3	LOC001	40	5.00	3.0
4	LOC001	12	5.00	3.0
5	LOC001	5	5.00	3.0
6	LOC001	250	5.00	3.0
7	LOC001	125	5.00	3.0
8	LOC001	15	5.00	3.0
9	LOC001	25	5.00	3.0
10	LOC001	10	5.00	3.0
11	LOC002	10	5.00	3.0
12	LOC002	5	5.00	3.0
13	LOC002	40	5.00	3.0
14	LOC002	12	5.00	3.0
15	LOC002	5	5.00	3.0
16	LOC002	250	5.00	3.0
17	LOC002	125	5.00	3.0
18	LOC002	15	5.00	3.0
19	LOC002	25	5.00	3.0



Trigger

This trigger automatically keeps track of new customers added to the database by adding them to a special table called “New Customers” and shows their CID, First, and last name



```
Create Table NewCustomer(  
  CustomerID varchar(50),  
  Status varchar(30),  
  CustomerFName Varchar(50),  
  CustomerLName varchar(50));
```

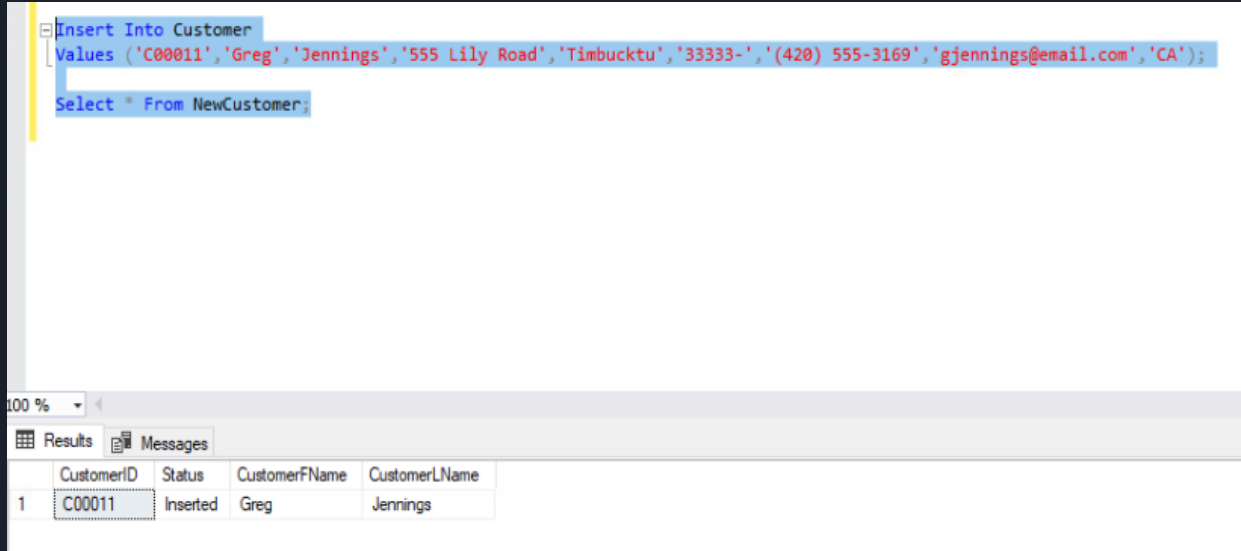
```
CREATE TRIGGER dbo.Customers_NEW  
  ON dbo.Customer  
  AFTER INSERT  
AS  
BEGIN
```

```
          SET NOCOUNT ON;  
          DECLARE @CustomerID varchar(50)  
  Declare @CustomerFName Varchar(50)  
  Declare @CustomerLName Varchar(50)  
  
  Select @CustomerID = CustomerList.CustomerID FROM inserted  
  CustomerList  
  Select @CustomerFName = CustomerList.CustomerFName FROM inserted  
  CustomerList  
  Select @CustomerLName = CustomerList.CustomerLName FROM inserted  
  CustomerList
```

```
  Insert INTO NewCustomer  
  Values(@CustomerID, 'Inserted', @CustomerFName, @CustomerLName)
```

```
END  
GO
```

Trigger - Example



The screenshot displays a SQL query editor with the following text:

```
Insert Into Customer  
Values ('C00011', 'Greg', 'Jennings', '555 Lily Road', 'Timbucktu', '33333-', '(420) 555-3169', 'gjennings@email.com', 'CA');  
Select * From NewCustomer;
```

Below the query editor, the 'Results' tab is active, showing a table with the following data:

	CustomerID	Status	CustomerFName	CustomerLName
1	C00011	Inserted	Greg	Jennings



Report

```
Select OrderDate, SaleID, Product.ProductID, ProductName, Sale.Price, Quantity,  
(Sale.Price * Sale.Quantity) as "Subtotal", (Sale.Price*Sale.Quantity*.08) as "Sales Tax", (Sale.Price*Sale.Quantity*1.08) as "Total Amount Due"  
FROM Product, Sale  
WHERE Sale.SaleID = 'sale0005'  
AND Product.ProductID = Sale.ProductID;
```

100 %

Results Messages

	OrderDate	SaleID	ProductID	ProductName	Price	Quantity	Subtotal	Sales Tax	Total Amount Due
1	2021-11-26	Sale0005	P00001	Vintage Rolling Desk	250.00	1	250.00	20.000000	270.000000



Report

```
Select OrderDate, StoreID, sum (product.cost*sale.quantity) AS "Total product cost",  
sum (product.price*sale.quantity) AS "Total Product Revenue",  
(sum ((product.price*sale.quantity)) *.08) AS "Shipping fees", sum(product.price*sale.quantity)-sum(product.cost*sale.quantity) AS "Total Revenue"  
From Dealer, Dealer_Product, product, Sale  
Where Dealer.DealerID = Dealer_Product.DealerID  
AND Dealer_product.productID = Product.productID  
AND Sale.ProductID = Product.ProductID  
group by OrderDate, StoreID;
```

	OrderDate	StoreID	Total product cost	Total Product Revenue	Shipping fees	Total Revenue
1	2019-08-17	LOC001	50.00	125.00	10.000000	75.00
2	2020-02-24	LOC002	6.00	30.00	2.400000	24.00
3	2020-05-02	LOC002	40.00	100.00	8.000000	60.00
4	2020-06-19	LOC003	16.00	40.00	3.200000	24.00
5	2020-10-02	LOC003	30.00	90.00	7.200000	60.00
6	2020-12-15	LOC003	25.00	60.00	4.800000	35.00
7	2021-03-24	LOC002	20.00	80.00	6.400000	60.00
8	2021-07-06	LOC002	4.00	20.00	1.600000	16.00
9	2021-11-26	LOC001	150.00	250.00	20.000000	100.00
10	2022-01-30	LOC001	20.00	50.00	4.000000	30.00





Conclusion

There is no doubt that Gold Rush Antiques is in need of a decent Database management system, and ours is designed for their management needs and what could come of the future. If Gold Rush Antiques uses our system, there will be no doubt a well for the future in their growth. With our new sales management system managing sales transactions, booths, booth locations, and product inventory, as well as our database system that supports their employees, dealers, and customers. Gold Rush Antiques can anticipate a large increase in productivity and efficiency which will result in an increase in company performance in the long run.